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# SCIENCE

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## THE BEGINNINGS OF INTELLIGENCE<sup>1</sup>

NOTHING shews more the force of habit in reconciling us to any phenomenon, than this, that men are not astonish'd at the operations of their own reason, at the same time, that they admire the *instinct* of animals, and find a difficulty in explaining it, merely because it can not be reduc'd to the very same principles. To consider the matter aright, reason is nothing but a wonderful and unintelligible instinct in our souls, which carries us along a train of ideas, and endows them with particular qualities, according to their particular situations and relations.—David Hume, "Treatise on Human Nature."

We all have a certain curiosity regarding the evolutionary history of our various powers and attributes, but from many points of view an unusual interest attaches to the first development of intelligence. The word intelligence is used in a variety of senses by writers on comparative psychology and any discussion of the origin of intelligence would be fruitless unless the meaning in which the term is employed be understood. One of the foremost of comparative psychologists, the acute Father Wasmann, defines intelligence as "the power of conceiving the relation of concepts to one another and of drawing conclusions therefrom. It involves abstraction, deliberation and self-conscious activity." Intelligence, according to Wasmann, is the God-given attribute of man alone; its possession separates man from brute by an impassable barrier.

Many comparative psychologists, among whom we may mention Lloyd Morgan, Forel and Loeb, adopt as a criterion of intelligence the power of forming asso-

<sup>1</sup> Read before the meeting of the Sigma Xi of the University of California, December 7, 1910.